

**LISTING OF CLAIMS:**

Claims 1 and 2 (Previously cancelled)

Claim 3 (Currently amended): The A surface-modified, pyrogenically produced oxides doped by aerosol, characterized in that the oxides are selected from the group consisting of  $\text{SiO}_2$ ,  $\text{Al}_2\text{O}_3$ ,  $\text{TiO}_2$ ,  $\text{B}_2\text{O}_3$ ,  $\text{ZrO}_2$ ,  $\text{In}_2\text{O}_3$ ,  $\text{ZnO}$ ,  $\text{Fe}_2\text{O}_3$ ,  $\text{Nb}_2\text{O}_5$ ,  $\text{V}_2\text{O}_5$ ,  $\text{WO}_3$ ,  $\text{SnO}_2$  and  $\text{GeO}_2$ , wherein the surface-is modified with one or several compounds selected from the following groups:

a) Organosilanes having either formula  $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n+1})$  or  $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n-1})$ , wherein

$\text{R}$  = alkyl, and

$n = 1 - 20$ ;

b) Organosilanes having either formula  $\text{R}'_x (\text{RO})_y\text{Si}(\text{C}_n\text{H}_{2n+1})$  or  $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n+1})$ ,

wherein

$\text{R}$  = alkyl,

$\text{R}'$  = alkyl,

$\text{R}'$  = cycloalkyl

$n = 1 - 20$ ,

$x+y = 3$ ,

$x = 1$ , or  $2$ , and

$y = 1$ , or  $2$ ;

c) Halogen organosilanes having either formula  $X_3 Si(C_nH_{2n+1})$  or  $X_3 Si(C_nH_{2n-1})$ ,

wherein

$X = Cl$ , or  $Br$ , and

$n = 1 - 20$ ;

d) Halogen organosilanes having either formula  $X_2 (R') Si(C_nH_{2n+1})$  or

$X_2 (R') Si(C_nH_{2n-1})$ , wherein

$X = Cl$ , or  $Br$

$R' = alkyl$  and or cycloalkyl, and

$n = 1 - 20$ ;

e) Halogen organosilanes having formula  $X (R')_2 Si(C_nH_{2n+1})$  or

$X (R')_2 Si(C_nH_{2n-1})$ , wherein

$X = Cl$ , or  $Br$ ;

$R' = alkyl$  or and cycloalkyl, and

$n = 1 - 20$ ;

f) Organosilanes having the formula  $(RO)_3Si(CH_2)_m-R'$

$R = alkyl$ ,

$m = 0$ , or  $1-20$ , and

$R' = methyl$ -,  $aryl$ -,  $-C_6H_5$ , substituted phenyl groups,

-C<sub>4</sub>F<sub>9</sub>, OCF<sub>2</sub>-CHF-CF<sub>3</sub>, -C<sub>6</sub>F<sub>13</sub>, -O-CF<sub>2</sub>-CHF<sub>2</sub>,  
-NH<sub>2</sub>, =N<sub>3</sub>, -SCN, -CH=CH<sub>2</sub>, -NH-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>,  
-N-(CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub>,  
-OOC(CH<sub>3</sub>)C=CH<sub>2</sub>,  
-OCH<sub>2</sub>-CH(O)CH<sub>2</sub>,  
-NH-CO-N-CO-(CH<sub>2</sub>)<sub>5</sub>,  
-NH-COO-CH<sub>3</sub>, -NH-COO-CH<sub>2</sub>-CH<sub>3</sub>, -NH-(CH<sub>2</sub>)<sub>3</sub>Si(OR)<sub>3</sub>,  
~~-S<sub>x</sub>-(CH<sub>2</sub>)<sub>3</sub>Si(OR)<sub>3</sub>, where x is 0, one or more,~~  
-SH, or  
-NR'R''R''', wherein R' = alkyl, or aryl; R'' = H, alkyl, aryl; and R''' = H, alkyl, aryl,  
benzyl, or C<sub>2</sub>H<sub>4</sub>N(R''')<sub>2</sub>, wherein R''''' = H, or alkyl;

g) Organosilanes having the formula (R'')<sub>x</sub>(RO)<sub>y</sub>Si(CH<sub>2</sub>)<sub>m</sub>-R', wherein

R'' = alkyl, or cycloalkyl,

x+y = 2,

x = 1, or 2,

y = 1, or 2,

m = 0, or 1 to 20, and

R' = methyl-, aryl, -C<sub>6</sub>H<sub>5</sub>, substituted phenyl groups,

-C<sub>4</sub>F<sub>9</sub>, -OCF<sub>2</sub>-CHF-CF<sub>3</sub>, -C<sub>6</sub>F<sub>13</sub>, -O-CF<sub>2</sub>-CHF<sub>2</sub>,

-NH<sub>2</sub>, -N<sub>3</sub>, SCN, -CH=CH<sub>2</sub>, -NH-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>,

-N-(CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>)<sub>2</sub>,

-OOC (CH<sub>3</sub>)C = CH<sub>2</sub>,  
-OCH<sub>2</sub>-CH(O) CH<sub>2</sub>,  
-NH-CO-N-CO-(CH<sub>2</sub>)<sub>5</sub>,  
-NH-COO-CH<sub>3</sub>, -NH-COO-CH<sub>2</sub>-CH<sub>3</sub>, -NH-(CH<sub>2</sub>)<sub>3</sub>Si(OR)<sub>3</sub>,  
~~-S<sub>x</sub>-(CH<sub>2</sub>)<sub>3</sub>Si(OR)<sub>3</sub>, where x is 0, one or more, or -SH , or~~  
-NR'R''R''', wherein R' = alkyl, or aryl; R'' = H,  
alkyl, or aryl; and R''' = H, alkyl, aryl, benzyl, or  
C<sub>2</sub>H<sub>4</sub>N(R''')<sub>2</sub>, wherein R'''' = H, or alkyl ;

h) Halogen organosilanes having the formula X<sub>3</sub>Si (CH<sub>2</sub>)<sub>m</sub>-R', wherein

X = Cl, or Br,

m = 0, 1 – 20,

R' = methyl-, aryl, -C<sub>6</sub>H<sub>5</sub>, substituted phenyl groups

-C<sub>4</sub>F<sub>9</sub>, -OCF<sub>2</sub>-CHF-CF<sub>3</sub>, -C<sub>6</sub>F<sub>13</sub>, -O-CF<sub>2</sub>-CHF<sub>2</sub>,  
-NH<sub>2</sub>, -N<sub>3</sub>, SCN, -CH=CH<sub>2</sub>, -NH-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>,  
-N-(CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>)<sub>2</sub>,  
-OOC (CH<sub>3</sub>)C = CH<sub>2</sub>,  
-OCH<sub>2</sub>-CH(O) CH<sub>2</sub>,  
-NH-CO-N-CO-(CH<sub>2</sub>)<sub>5</sub>,  
-NH-COO-CH<sub>3</sub>, -NH-COO-CH<sub>2</sub>-CH<sub>3</sub>, -NH-(CH<sub>2</sub>)<sub>3</sub>Si(OR)<sub>3</sub>,  
~~-S<sub>x</sub>-(CH<sub>2</sub>)<sub>3</sub>Si(OR)<sub>3</sub>, where x is 0, one or more, or~~  
-SH;

i) Halogen organosilanes having the formula  $(R)X_2Si(CH_2)_m-R'$ , wherein

$X = Cl$ , or  $Br$ ,

$R =$  alkyl such as methyl-, ethyl-, or propyl-,

$m = 0$ , or  $1 - 20$ , and

$R'$  = methyl-, aryl-,  $-C_6H_5$ , substituted phenyl groups,

$-C_4F_9$ ,  $-OCF_2-CHF-CF_3$ ,  $-C_6F_{13}$ ,  $-O-CF_2-CHF_2$ ,

$-NH_2$ ,  $-N_3$ ,  $SCN$ ,  $-CH=CH_2$ ,  $-NH-CH_2-CH_2-NH_2$ ,

$-N-(CH_2-CH_2-NH_2)_2$ ,

$-OOC(CH_3)C=CH_2$ ,

$-OCH_2-CH(O)CH_2$ ,

$-NH-CO-N-CO-(CH_2)_5$ ,

$-NH-COO-CH_3$ ,  $-NH-COO-CH_2-CH_3$ ,

$-NH-(CH_2)_3Si(OR)_3$ ,

$-S_x(CH_2)_3Si(OR)_3$ , where  $x$  is 0, one or more, or

$-SH$ ;

(j) Halogen organosilanes having the formula  $(R)_2X Si(CH_2)_m-R'$ , wherein

$X = Cl$ , or  $Br$ ,

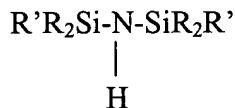
$R =$  alkyl,

$m = 0$ , or  $1 - 20$ , and

$R'$  = methyl-, aryl-,  $-C_6H_5$ , substituted phenyl groups,

-C<sub>4</sub>F<sub>9</sub>, -OCF<sub>2</sub>-CHF-CF<sub>3</sub>, -C<sub>6</sub>F<sub>13</sub>, -O-CF<sub>2</sub>-CHF<sub>2</sub>,  
 -NH<sub>2</sub>, -N<sub>3</sub>, SCN, -CH=CH<sub>2</sub>, -NH-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>,  
 -N-(CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>)<sub>2</sub>,  
 -OOC (CH<sub>3</sub>)C = CH<sub>2</sub>,  
 -OCH<sub>2</sub>-CH(O) CH<sub>2</sub>,  
 -NH-CO-N-CO-(CH<sub>2</sub>)<sub>5</sub>,  
 -NH-COO-CH<sub>3</sub>, -NH-COO-CH<sub>2</sub>-CH<sub>3</sub>, -NH-(CH<sub>2</sub>)<sub>3</sub>Si(OR)<sub>3</sub>,  
~~-S<sub>x</sub>-(CH<sub>2</sub>)<sub>3</sub>Si(OR)<sub>3</sub>, where x is 0, one or more, or~~  
 -SH;

(k) Silazanes having the formula

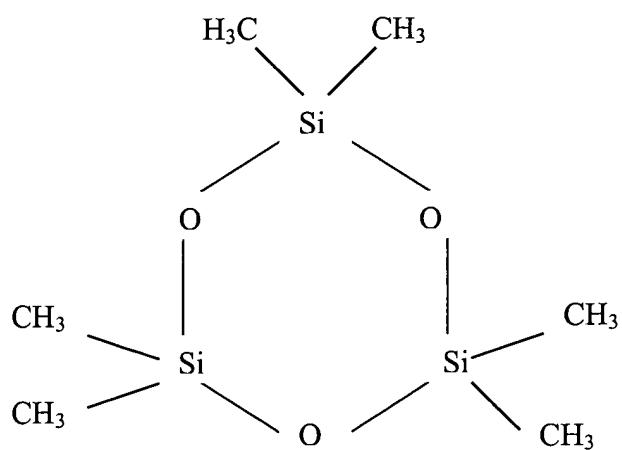


wherein R = alkyl, and

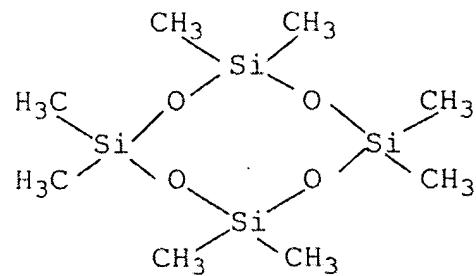
R' = alkyl, or vinyl; or

(l) Cyclic polysiloxanes D 3, D 4 or D 5,

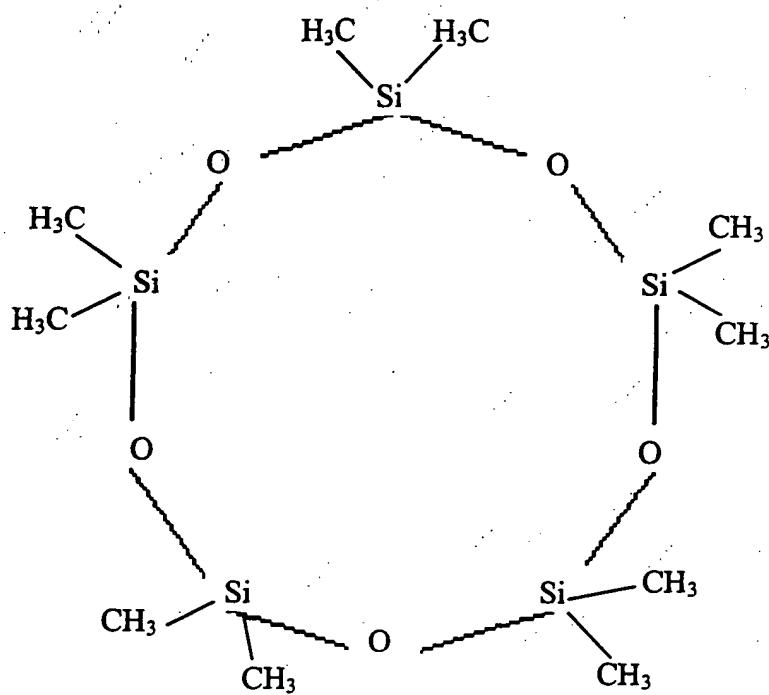
where 1) D3 has the formula:



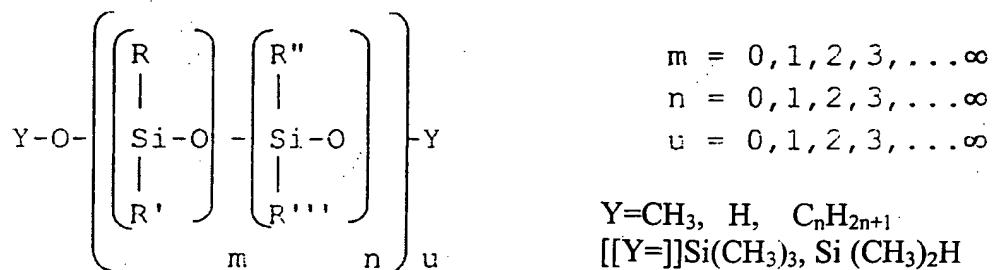
2) D4 has the formula:



and 3) D5 has the formula:



m) Polysiloxanes or silicone oils having any one of the formula



,  $Si(CH_3)_2OH$ ,  $Si(CH_3)_2(OCH_3)$ , or

$Si(CH_3)_2(C_nH_{2n+1})$ , wherein  $n=1-20$ ,

wherein,

R = alkyl, aryl,  $(CH_2)_n-NH_2$ , or H,

R' = alkyl, aryl,  $(CH_2)_n-NH_2$ , or H,

R'' = alkyl, aryl,  $(CH_2)_n-NH_2$ , or H,

R''' = alkyl, aryl,  $(CH_2)_n-NH_2$ , or H.

Claim 4 (Previously presented): A method of producing the surface-modified oxides in accordance with claim 3, comprising placing pyrogenically produced oxides doped by aerosol in a suitable mixing container, spraying the oxides under intensive mixing with the surface-modification reagent or a mixture of several surface-modification reagents.

Claim 5 (Previously presented): In a reinforcing filler composition wherein the improvement comprises the surface-modified oxides according to claim 3 as reinforcing filler.

Claim 6 (Original) The method of claim 4 wherein the spraying step includes spraying with water and/or acid prior to the spraying with the surface-modification reagent or a mixture of several surface-modification reagents.

Claim 7 (Original) The method of claim 4 further comprising re-mixing at 15 to 30 minutes and tempering at a temperature of 100 to 400 °C for a period of 1 to 6 hours.

Claim 8 (Previously presented) The surface-modified, pyrogenically produced oxides according to claim 3 wherein the cyclic polysiloxanes is D 4.

Claim 9 (Cancelled)